

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Before the Board of Patent Appeals and Interferences

In re the Application of

Krister HANSSON et al

Serial No.: 10/580,219

Filed: June 28, 2006

For: **A PROCESS FOR THE MANUFACTURING OF DECORATIVE LAMINATE**

**APPEAL BRIEF**

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Date: September 21, 2009

(i) REAL PARTY IN INTEREST

The real party in interest is the assignee of the inventor's interest, Pergo (Europe) AB, a company formed under the laws of Sweden having a principal address in Trelleborg, Sweden.

(ii) RELATED APPEALS AND INTERFERENCES

There is no known prior or pending appeals, judicial proceedings or interferences, known to Appellant, his assignee, or undersigned counsel which may be related to, directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal.

(iii) STATUS OF CLAIMS

Claims 1, 2, 4, 6-9, 16 and 17 stand finally rejected and are the subject matter of the Appeal. Claims 3, 5, 10-15 and 18-20, all the other claims in this application, have been cancelled.

(iv) STATUS OF AMENDMENTS

A single Amendment after Final Rejection was filed March 20, 2009, and was entered for purposes of Appeal, as noted in the Advisory Action, dated March 30, 2009.

(v) SUMMARY OF CLAIMED SUBJECT MATTER

The claimed invention, as exemplified by independent claim 1, the only independent claim in the application, is directed to the process for manufacturing of a decorative laminate. The process comprises:

providing a base layer;

printing a decorative layer comprising a décor on the base layer, the decorative layer comprising a printing ink, the printing ink comprising an amino resin;

applying a wear layer to the decorative layer, the wear layer comprising a thermosetting resin selected from the group consisting of phenol-formaldehyde resin, urea formaldehyde resin and mixtures thereof; and

bonding the decorative layer and the wear layer together in a laminate press under increased temperature and pressure, whereby the presence of amino resin in the ink increases the bonding more than could be achieved by the thermosetting resin alone.

Support for such steps are described in the original application, for example in the Abstract, and in the specification in the paragraph bridging pages 1-2. It had been known that prior art laminates experienced delamination and that the printing ink itself sometimes causes problems with delamination, and it was thus unexpected to find a printing ink that solved the problem of delamination. Specification page 1, fourth and fifth paragraphs.

(vi) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

(1.) The rejection of claims 1, 2, 4, 6, 7, 16 and 17 under 35 U.S.C. 103 (a) as unpatentable over the combination of Hansson (U.S. Patent 6,565,919) in view of Sano (U.S. Patent publication 2002/0077384) and further in view either one of Arledter (U.S. Patent 2,816,851) or Mott ( U.S. Patent Publication 2002/0007909).

(2.) The rejection of claims 8 and 9 under 35 U.S.C. 103 (a) as unpatentable over the combination of references in paragraph (1.) above and further in view of Schulz (U.S. Patent Publication 2003/0039810).

(vii) ARGUMENT

(1.) The rejection of claims 1, 2, 4, 6, 7, 16 and 17 under 35 U.S.C. 103 (a) as unpatentable over the combination of Hansson (U.S. Patent 6,565,919) in view of Sano (U.S. Patent publication

2002/0077384) and further in view either one of Arledter (U.S. Patent 2,816,851) or Mott ( U.S. Patent Publication 2002/0007909).

Applicants use an amino resin printing ink, **in combination with certain types of wear layer**, and it is the presence of the amino resin in the printing ink which increases the bonding more than can be achieved by using the recited thermosetting resin of phenol-formaldehyde, urea-formaldehyde and mixtures thereof, alone. Accordingly, it is neither "inherent" nor obvious to achieve improved bonding by the use of the printing ink of Sano, in the process of Hansson '919.

First, the Hansson wear layer is melamine-formaldehyde and not the claimed "phenol-formaldehyde and urea-formaldehyde and mixtures thereof". Secondly, the only evidence known to those skilled in the art prior to the invention is that it was the presence of the printing ink itself that was cause of de-lamination of a decorative laminate (see, for example, page 1, paragraph 4 of the specification).

Thus, there is no disclosure anywhere in the cited Hansson '919 or Sano teachings, that the use of an amino resin in a printing ink will give a higher bonding to thermosetting resins selected from the group consisting of "phenol-formaldehyde, urea-formaldehyde and mixtures thereof".

In the Advisory Action, the Examiner has said that the claimed improvement in bonding is an "inherent" characteristic of Sano's ink because the ink composition taught in Sano is essentially the same as that which is claimed.

The deficiency in this rejection is that although the amino ink of Sano is essentially the type of ink the applicants use in their invention, when you combine the Sano et al teaching with the Hansson '919 reference, the printing ink in Hansson '919 contacts "one or more sheets of  $\alpha$ -cellulose which are impregnated with melamine-formaldehyde resin" (See column 3, lines 55-57 not phenol-formaldehyde, urea-formaldehyde and mixtures thereof as claimed). Thus, the "inherency" in the proposed combination of Sano with Hansson '919 would not be the claimed invention. Such "inherency" would be between an "amino resin ink and a melamine-formaldehyde resin" and the Examiner has not shown any inherency that would occur in a bond between an amino resin ink and the claimed wear layers.

comprising phenol-formaldehyde resin, urea-formaldehyde and resin and mixtures thereof as explicitly set forth in claim 1.

The Examiner is not permitted to utilize any portion of applicant's own specification as a teaching because the specification is not part of "prior art", and thus the Examiner's rejection still lacks any teaching that the use of an amino resin containing printing ink would improve the bonding with the claimed thermosetting resin specified in claim 1.

While the Examiner argues that the secondary references i.e. Arledter, suggest phenol-formaldehyde as an alternative to melamine-formaldehyde as a resin for an overlay sheet; or Mott which teaches that a wear layer may be provided with a plurality of  $\alpha$ -cellulose sheets impregnated with urea-formaldehyde as an alternative to melamine-formaldehyde, neither of these references teach a phenol-formaldehyde or urea-formaldehyde (or mixtures thereof) wear layer in contact with a printing ink as a decorative layer. Thus, neither of these references could ever experience the problem possibly experienced in Hansson '919 where the decorative layer is formed by directly printing a printing ink on a base layer. Rather, each of our Arledter and Mott are directed to early forms of laminating processes in which the décor layers (usually décor papers) are overlaid with wear layers. Because there was no direct printing i.e. no presence of a printing ink directly on a base layer as in Hansson '919 (and in the instant invention), there was no de-lamination problem introduced in these earlier references. It was only when the "direct printing" of a décor with a printing ink became available, as in Hansson '919, that the problems of de-lamination arose. Thus, neither Arledter nor Mott could have suggested to one ordinary skill in the art that the problem of de-lamination when using a printing ink, even an amino containing printing ink as in Sano, could be overcome when the printing ink was overlaid by a wear layer comprising a "thermosetting resin selected from the group consisting of a urea-formaldehyde resin, a phenol-formaldehyde resin, or mixtures thereof. Thus, the proposed combination of references still does not teach the claimed process, nor result in the improved results which are achieved by the present invention. Therefore applicants respectfully submit that under the *KSR* requirements, the Examiner has failed as a fact finder in locating any collection of references teaching all of the claimed steps of the process.

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Although the Examiner argues that “inherency” results when this collage of references are assembled, the Examiner is confusing “inherency”, suitable for a rejection under 35 U.S.C 102 of anticipation, for one where the rejection is based upon obviousness under Section 103. Although the Examiner has cited MPEP 2112, and the two leading cases cited therein, neither of these cases involve the interactions of different chemical substances as in the instant case.

As the court stated in *Kloster Speedsteel AB v. Crucible Inc.*, 230 USPQ 81, 88 (Fed.Cir.1986) “inherency and obviousness are distinct concepts” citing *W.L. Gore & Associates v. Garlock*, 220 USPQ 303, 314 (Fed. Cir. 1983) citing *In re Sporman*, 150 USPQ 449, 452 (1996) cert. denied, 105 S.Ct. 172 (1984).

In the earlier cases decided by the Court of Customs and Patent Appeals, the CCPA warned about confusing the issue of obviousness and inherency. In that case applicant claimed a method for curbing appetite by administrating a compound in a specific dosage. The Office urged the citation of a reference, teaching the compound employed in the claimed method, and a second disclosure as a reference teaching the same dosage as in the claimed method, but where such dosage was applied to combat “microbial infestation [and not curbing appetite] but argued it to be “inherently” an appetite curbing dosage.

There the court stated:

[Inherency] is quite immaterial if, as the record established here, one of ordinary skill in the art would not appreciate or recognize that inherent result.

*In re Shetty*, 195USPQ 753, 756 (1977).

The issues in this Appeal are analogous. Not one reference suggests amino inks improve bonding to a thermosetting resin selected from the group of phenol formaldehyde, urea formaldehyde and mixtures thereof. It is quite apparent that the primary reference (Hansson '919) does not teach either of these resins, but does use a printing ink in laminated contact therewith. This is all applicants have admitted when their specification speaks of the problem of de-lamination caused by a printing ink. Neither Arledter nor Mott teach any printing ink in combination with any thermosetting resin. These

references therefore, could not even have contemplated the problem of de-lamination caused by the presence of printing ink.

Lastly, the amino printing ink of Sano is also not in contact with the claimed "phenol formaldehyde, urea formaldehyde, and mixtures thereof" as claimed. All that is shown by the Examiner are separate chemical materials, none of which recognize the fact that when certain combinations of laminae are selected, the problem of the prior art de-lamination can be overcome. This is clearly not "inherent" but requires a knowledge of the nature of chemical materials, which is certainly not predictable, but uncertain. Only with trial and error can chemical interactions be verified. Thus, the claimed invention is neither "inherent", nor obvious.

In the instant case, there is no teaching,(other than that of applicants' own specification) that the use of amino resin containing printing ink with specific non-melamine formaldehyde thermosetting resins, would increase the bond strength between the base layer upon which the amino ink is printed and overlying wear layer in which thermosetting resin is present.

(2.) The rejection of claims 8 and 9 over the references used in paragraph (1.) above and further in view of Schulz also does not establish a prima facie case of obviousness. As stated in paragraph 7 of the Office Action of September 28, 2007 (incorporated into the present Final Rejection by reference) "Schulz teaches a paper layer suitable for inkjet printing and incorporation into decorative laminates (Abstract, paragraph 1-5, 12-14 and 20). Nowhere is there an allegation that an amino ink would solve the problem of de-lamination of laminates, nor even a recognition that de-lamination can be caused by the presence of a printing ink. Thus, it adds no disclosure to cure the deficiencies in the rejection of base claim 1, fromwhich claims 8 and 9 ultimately depend.

For the foregoing reasons, reversal of all rejections by the Board are respectfully requested.

(viii) CLAIMS APPENDIX

A copy of the claims on Appeal is reproduced in the Appendix.

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(ix) EVIDENCE APPENDIX

Not applicable

(x) RELATED PROCEEDING APPENDIX

Not applicable

Respectfully submitted,

  
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**APPENDICES**

The following Appendices are attached to and made a part of this brief:

Appendix A	Claims on Appeal
Appendix B	Evidence (N/A)
Appendix C	Related Proceedings (N/A)

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APPENDIX A: Claims on Appeal

1. A process for the manufacturing of a decorative laminate comprising:  
providing a base layer;  
printing a decorative layer comprising a décor on the base layer, the decorative layer comprising a printing ink, the printing ink comprising an amino resin;  
applying a wear layer to the decorative layer, the wear layer comprising a thermosetting resin selected from the group consisting of, phenol-formaldehyde resin, urea formaldehyde resin and mixtures thereof; and  
bonding the decorative layer and the wear layer together in a laminate press under increased temperature and pressure, whereby the presence of amino resin in the ink increases the bonding more than could be achieved by the thermosetting resin alone.
2. A process according to claim 1 wherein the printing ink is an alkyde based ink.
4. A process according to claim 2 wherein the amino resin is an etherified amino resin.
6. A process according to claim 1 wherein the base layer is manufactured in the desired end user format and provided with edges intended for joining before printing of the decorative layer and application of the wear layer.
7. A process according to claim 1 wherein the base layer comprises particle board.
8. A process according to claim 6 wherein the base layer comprises a paper layer on which the décor is printed.

9. A process according to claim 8 wherein the paper layer is bonded to the base layer prior to the printing of the décor.
16. A process according to claim 1 wherein the wear layer is provided with a surface structure that enhances the realistic impression of the décor during or after the lamination.
17. A process according to claim 1 wherein the base layer comprises fibre board.

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APPENDIX B: Evidence Appendix under 37 CFR §41.37(c)(1)(ix)

N/A

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APPENDIX C: Related Proceedings Appendix under 37 CFR §41.37(c)(1)(x)

N/A